

In the recent European literature we find a very interesting article by CHRISTY,²⁶ in which the author describes a gall previously unrecorded for the British Isles. It reaches its full size of 2-10 inches in length by the middle or end of May. It is a malformation of the pistillate flower and has the appearance of a bunch of moss. The same or a very similar gall due to *Eriophyes triadiatus* Napela is well known on the Continent, but thus far the author has failed to find the mites in the British forms. It appears to be somewhat similar to our American *Acarus aenigma* Walsh.—MEL T. COOK.

Anthocyan pigments in plants.—In an examination of the recent work upon the occurrence and chemical nature of the red, purple, and blue plant pigments known as anthocyanins, and yellow pigments designated flavones or flavonols, EVEREST²⁷ has summarized the present state of our knowledge in a very concise manner. He shows that it has been established that (1) the anthocyanins always occur as glucosides, and that some seven of these pigments have now been isolated; (2) the same pigment may be capable of showing a blue, purple, or red color, according as it exists as alkali salt, free pigment, or oxonium salt of some acid; all anthocyanins do not, however, form blue alkali salts; (3) the anthocyanins may be obtained from flavonols by reduction followed by spontaneous dehydration; and (4) glucosides of flavonols can pass, by reduction, to glucoside anthocyanins without intermediate hydrolysis.—GEO. D. FULLER.

Morphology of Gnetum.—THOMPSON²⁸ has published a preliminary note on the embryo sac conditions in *Gnetum*, several species of which he has investigated. There are no vegetative cells in the male gametophyte, which is the expected contrast with *Ephedra*. Only free nuclei occur in the embryo sac before the pollen tube enters, although cells are formed before fertilization takes place, and one or more eggs are definitely organized. Perhaps the most significant observation is that before fertilization the female gametophyte becomes divided into a large number of multinucleate compartments, all the nuclei in each compartment later uniting to form a fusion nucleus, the endosperm being formed by the division of the fusion nuclei in the lower compartments. This situation is certainly very suggestive of a historical relation to the polar fusion in the embryo sac of angiosperms.—J. M. C.

Origin of stipules.—The much debated question of the origin of stipules has received fresh light from the anatomical studies of SINNOTT and

²⁶ CHRISTY, MILLER, Witches brooms on British willows. *Jour. Botany* 53: 97-102. 1915.

²⁷ EVEREST, ARTHUR E., Recent chemical investigations of the anthocyan pigments and their bearing upon the production of these pigments in plants. *Jour. Genetics* 45:361-367. 1915.

²⁸ THOMPSON, W. P., Preliminary note on the morphology of *Gnetum*. *Amer. Jour. Bot.* 2:161. 1915.